4	ω	2	H	
BRS	BRS	BRS	BRS	Туре
L4	Г 3	Ľ2	Ę	
0	0	0	5 8 3	L # Hits
csp adj 1	1 same (endogenous adj inhibitor)	calcipressin	calcineurin	Search Text
USPAT; US-PGPUB; EPO; JPO; DERWENT	USPAT; US-PGPUB; EPO; JPO; DERWENT	USPAT; US-PGPUB; EPO; JPO; DERWENT	USPAT; US-PGPUB; EPO; JPO; DERWENT	DBs
2002/10/L 8 17:32	2002/10/	2002/10/L 8 17:31	2002/10/ 8 17:30	Time Stamp
Ę	<u>-</u>	. , , , , , , , , , , , , , , , , , , ,		Comm Defin ents ition
0	0	0	0	or Er in ro on rs

> d his

(FILE 'HOME' ENTERED AT 17:35:59 ON 18 OCT 2002)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT

17:36:27 ON 18 OCT 2002

- L1 13784 S CALCINEURIN
- L2 26 S L1 (P) (ENDOGENOUS INHIBITOR)
- L3 6 DUPLICATE REMOVE L2 (20 DUPLICATES REMOVED)
- L4 18 S CALCIPRESSIN
- L5 144 S CSP1
- L6 0 S L5 (P) L1
- L7 16 S L4 (P) L1
- L8 4 DUPLICATE REMOVE L7 (12 DUPLICATES REMOVED)
- L9 4 S L8 NOT L3

 $\Rightarrow \log y$

FILE 'HOME' ENTERED AT 17:35:59 ON 18 OCT 2002

=> file medline caplus biosis embase scisearch agricola

COST IN U.S. DOLLARS SINCE FILE TOTAL SESSION

ENTRY 0.21 0.21

FULL ESTIMATED COST

FILE 'MEDLINE' ENTERED AT 17:36:27 ON 18 OCT 2002

FILE 'CAPLUS' ENTERED AT 17:36:27 ON 18 OCT 2002

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'BIOSIS' ENTERED AT 17:36:27 ON 18 OCT 2002 COPYRIGHT (C) 2002 BIOLOGICAL ABSTRACTS INC. (R)

FILE 'EMBASE' ENTERED AT 17:36:27 ON 18 OCT 2002

COPYRIGHT (C) 2002 Elsevier Science B.V. All rights reserved.

FILE 'SCISEARCH' ENTERED AT 17:36:27 ON 18 OCT 2002

COPYRIGHT (C) 2002 Institute for Scientific Information (ISI) (R)

FILE 'AGRICOLA' ENTERED AT 17:36:27 ON 18 OCT 2002

=> s calcineurin

13784 CALCINEURIN

=> s l1 (p) (endogenous inhibitor)

26 L1 (P) (ENDOGENOUS INHIBITOR)

=> duplicate remove 12

DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH'

KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n

PROCESSING COMPLETED FOR L2

6 DUPLICATE REMOVE L2 (20 DUPLICATES REMOVED)

=> d 13 1-6 ibib abs

AUTHOR:

ANSWER 1 OF 6 MEDLINE DUPLICATE 1

ACCESSION NUMBER: 2002183217 MEDLINE

DOCUMENT NUMBER: 21895837 PubMed ID: 11786544

TITLE: Targeted inhibition of calcineurin in pressure-overload

> cardiac hypertrophy. Preservation of systolic function. Hill Joseph A; Rothermel Beverly; Yoo Ki-Dong; Cabuay

Barry; Demetroulis Elaine; Weiss Robert M; Kutschke William; Bassel-Duby Rhonda; Williams R Sanders

Department of Internal Medicine, University of Town College CORPORATE SOURCE:

of Medicine, Iowa City, Iowa 52242-1081, USA..

joseph-hill suiowa.edu

CONTRACT NUMBER: HL03908 (NHLBI)

JOURNAL OF BIOLOGICAL CHEMISTRY, (2002 Mar 22) 277 (12) SOURCE:

10251-5.

. . .

Journal code: 2985121R. ISSN: 0021-9258.

PUB. COUNTRY:

United States Journal; Article; (JOURNAL ARTICLE) DOCUMENT TYPE:

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200204

> of mysoyte transformation. It is not known whether overexpression of MCIP1, a recently described ***endogenous*** ***inhibitor*** of ***calcineurin*** , impacts the hypertrophic response to $\overline{w}^{\star} := \{ (t_{i_1}, t_{i_2}) \mid i_{i_1} \in \mathcal{I} \}$

of hemodynamic stress are unknown. Transgenic mice expressing a human cDNA encoding hMCIP1 in the my redium were subjected to thorac aortic banding. Transgenic mice and wild type littermates tolerated pressure overload equally well. Wild type mice developed left ventricular hypertrophy, but the hypertrophic response in transgenics was significantly blunted. An isoform of MCIP1 transcript was up-regulated by pressure stress, whereas MCIP2 transcript was not. Expression patterns of fetal genes were differentially regulated in banded MCIP1 hearts compared with wild type. Echocardiography performed at 3 weeks and 3 months revealed preservation of both left ventricular size and systolic function in banded MCIP1 mice despite the attenuated hypertrophic response. These data demonstrate attenuation of hypertrophic transformation when

calcineurin is inhibited by MCIP1. Further, these data suggest that activation of hypertrophic marker genes may not be directly dependent on ***calcineurin*** activity. Finally, they demonstrate that ventricular performance is preserved despite attenuation of compensatory

hypertrophy.

AUTHOR:

ANSWER 2 OF 6 MEDLINE DUPLICATE 2

ACCESSION NUMBER: 2002397693 MEDLINE

DOCUMENT NUMBER: 22133761 PubMed ID: 12114545

Calpain-dependent cleavage of cain/cabin1 activates TITLE: calcineurin to mediate calcium-triggered cell death.

Kim Min-Jung; Jo Dong-Gyu; Hong Gil-Sun; Kim Byung Ju; Lai

Michael; Cho Dong-Hyung; Kim Ki-Woo; Bandyopadhyay Arun; Hong Yeon-Mi; Kim Do Han; Cho Chunghee; Liu Jun O; Snyder

Solomon H; Jung Yong-Keun

Department of Life Science, Kwangju Institute of Science CORPORATE SOURCE:

and Technology, 1 Oryong-dong, Puk-gu, Kwangju 500-712,

PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE SOURCE:

UNITED STATES OF AMERICA, (2002 Jul 23) 99 (15) 9870-5.

Journal code: 7505876. ISSN: 0027-8424.

PUB. COUNTRY: United States

Journal; Article; (JOURNAL ARTICLE) DOCUMENT TYPE:

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200209

ENTRY DATE: Entered STN: 20020731

Last Updated on STN: 20020906 Entered Medline: 20020904

AB Cain/cabinl is an ***endogenous*** ***inhibitor*** of

calcineurin (Cn), a calcium-dependent serine/threonine phosphatase involved in various cellular functions including apoptosis. We show here that during apoptosis cain/cabin1 is cleaved by calpain at the carboxyl terminus to generate a cleavage product with a molecular mass of 32 kDa as a necessary step leading to Cn-mediated cell death. Mouse cain/cabin1 was identified from a thymus cDNA library by an in vitro substrate-screening assay with calpain. Exposure of Jurkat cells to the calcium ionophore, induced cain/cabin1 cleavage and cell death, accompanied by activation of

calpain and cn. The calpain inhibitors, calpeptin and 2557, suppressed both -induced cain/cabin1 cleavage and Cn activation, indicating that Cn activation and cain/cabin1 cleavage are calpain-dependent. Expression of cain/cabin1 or a catalytically inactive Cn mutant [CnA

beta(2)(1-401/H160N)] and treatment with FK506 reduced -induced cell death. In vitro calpain cleavage and immunoprecipitation assays with deletion mutants of cain/cabin1 showed that cleavage occurred in the Cn-binding domain of cain/cabin1, indicating that the cleavage at its C terminus by calpain prevented cain/cabin1 from binding to Cn. In addition, in vitro binding assays showed that cain/cabinl bound to the Cn B-binding domain of Cn A. Taken together, these results indicate that calpain

cleaves the ***calcineurin*** -binding domain of cain/cabin1 to

DICUMENI NUMBER

ulu est. Hunked il: Tisabta.

Thapsigargin induced apoptosis involves Cabin1-MEF2-mediated induction of Nur77.

AUTHOP: Liu Wa Youn H D: Liu J C

02139, USA, SOURCE: EUROPEAN J

EUROPEAN J NAL OF IMMUNOLOGY, (2001 Jun)

(6) 1757-6

PUB. COUNTRY:
DOCUMENT TYPE:

Journal code: 1273201. ISSN: 0014-2980. Germany: Germany, Federal Republic of Journal; Article; (JOURNAL ARTICLE)

English

FILE SEGMENT:

Priority Journals

ENTRY MONTH:

200108

ENTRY DATE:

LANGUAGE:

Entered STN: 20010813

Last Updated on STN: 20010813 Entered Medline: 20010809

Thapsigargin (TG), which inhibits endoplasmic reticulum-dependent Ca(2+)-ATPase and thereby increases cytosolic Ca(2+), has been reported to cause apoptosis in T lymphocytes another cell types. In this study, we investigated the molecular mechanisms that are involved in the apoptosis induced by TG in T cell hybridomas. Exposure to TG results in rapid induction of the orphan steroid receptor, Nur77, accompanied by apoptosis of T cell hybridomas. The expression of Nur77 in response to TG treatment

is sensitive to cyclosporin A, implicating that activation of

calcineurin is necessary for Nur77 expression. The TG-induced
Nur77 expression is also inhibited by overexpression of Cabin1, an

endogenous ***inhibitor*** of ***calcineurin*** and a
corepressor of the transcription factor MEF2, suggesting that MEF2
activation is required for Nur77 expression. These results suggest that
induction of Nur77 expression and apoptosis by TG are mediated by the same
signaling pathways that are involved in T cell receptor-mediated thymocyte
apoptosis, including the ***calcineurin*** pathway and Cabin1-MEF2
pathway.

L3 ANSWER 4 OF 6

MEDLINE

DUPLICATE 4

ACCESSION NUMBER:

2001382225 MEDLINE

DOCUMENT NUMBER:

21152920 PubMed ID: 11231093

TITLE:

AUTHOR:

Dscrl, a novel ***endogenous*** ***inhibitor*** of

calcineurin signaling, is expressed in the primitive ventricle of the heart and during neurogenesis.

Casas C; Martinez S; Pritchard M A; Fuentes J J; Nadal M; Guimera J; Arbones M; Florez J; Soriano E; Estivill X;

Alcantara S

CORPORATE SOURCE:

Down Syndrome Research Group, Medical and Molecular Genetics Center - IRO, Avia. de Castelldefels, km. 2.7, L'Hospitalet de Llobregat, 08907, Barcelona, Spain.

SOURCE:

MECHANISMS OF DEVELOPMENT, (2001 Mar) 101 (1-2) 289-92.

Journal code: 9101218. ISSN: 0925-4773.

PUB. COUNTRY:

Ireland

DOCUMENT TYPE:

Journal; Article; (JOURNAL ARTICLE)

LANGUAGE:

English

FILE SEGMENT:

Priority Journals

ENTRY MONTH:

200107

ENTRY DATE:

Entered STN: 20010709

Last Updated on STN: 20010709

Entered Medline: 20010/05

We have demonstrated that DSCR1 acts as a negative regulator of calcineurin-mediated signaling and that its transcript is overexpressed in the Down syndrome (DS) fetal brain. To evaluate the possible involvement of DSCF1 in DS, we have cloned the mouse gene and analyzed its expression pattern in the central nervous system (CNS). Early expression of Dscr1 is detected mainly in the heart tube and in the CNS in rhombomere 4 and the pretectum. From embryonic day 14.5 onwards, Dscr1 is widely distributed in the CNS but becomes more restricted as the brain matures. We confirmed its neuronal expression pattern in the adult, preferentially in Purkinje and pyramidal cells, by double labeling with glial fibrillary acidic protein. We also show that although Dscr1 is present in trisomy in the Ts65Dn

L3 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2002 ACS ACCESSION NUMBER: 2000:659533 CAPLUS

un la patienti.

mingraph in medical

(Cain) to rat chromosome band 20p12 by fluorescence in situ ridization

AUTHOR(S):

Kim, H.; Jung, Y. K.; Jo, D. G.; Park, S. H.
Institute of Human Genetics, Department of Anatomy, CORPORATE SOURCE:

Korea University College of Medicine, Seoul, 136-705,

S. Korea

Cytogenetics and Cell Genetics (2000), 89(3-4), SOURCE:

236-237

CODEN: CGCGBR; ISSN: 0301-0171

S. Karger AG

PUBLISHER: DOCUMENT TYPE: Journal LANGUAGE: English

Calcineurin inhibitor is a most potent ***endogenous***

inhibitor of ***calcineurin*** , and in its physiol. role is suspected to provide a docking site for ***calcineurin*** in its

inactive form. Here we report the mapping of rat gene Cain to chromosome

band 20p12 using fluorescence in situ hybridization.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

DUPLICATE 5 ANSWER 6 OF 6 MEDLINE

ACCESSION NUMBER: 2000062818 MEDLINE

DOCUMENT NUMBER: 20062818 PubMed ID: 10593895

TITLE: Inhibition of calcineurin phosphatase activity by a

calcineurin B homologous protein.

Lin X; Sikkink R A; Rusnak F; Barber D L AUTHOR:

CORPORATE SOURCE: Department of Stomatology, University of California, San

Francisco, California 94143, USA.

CONTRACT NUMBER: DK40259 (NIDDK)

> GM 47413 (NIGMS) GM46865 (NIGMS)

SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1999 Dec 17) 274 (51)

36125-31.

Journal code: 2985121R. ISSN: 0021-9258.

United States PUB. COUNTRY:

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200001

ENTRY DATE: Entered STN: 20000204

Last Updated on STN: 20000204 Entered Medline: 20000127

Calcineurin , a Ca(2+)/calmodulin-stimulated protein phosphatase, plays a key role in T-cell activation by regulating the activity of NFAT (nuclear factor of activated T cells), a family of transcription factors required for the synthesis of several cytokine genes. ***Calcineurin*** is the target of the immunosuppressive drugs cyclosporin A and FK506 complexed with their cytoplasmic receptors cyclophilin and FKBP12,

respectively. In this study we report that ***calcineurin*** is also the target of a recently identified Ca(2+)-binding protein, CHP (for

calcineurin homologous protein), which shares a high degree of homology with the regulatory B subunit of ***calcineurin*** and with calmodulin. In Jurkat and HeLa cells, overexpression of CHP specifically impaired the nuclear translocation and transcriptional activity of NFAT but had no effect on AP-1 transcriptional activity and only a small (<25%) inhibitory effect on the transcriptional activity of NFkappaB. Further study indicated that CHP inhibits ***calcineurin*** activity. In cells overexpressing CHP, the phosphatase activity of immunoprecipitated

calcineurin was inhibited by approximately 50%; and in a reconstituted assay, the activity of purified ***calcineurin*** inhibited up to 97% by the addition of purified recombinant CHP in a dose dependent manner. Moreover prolonged activation of Jurkat cells was

=> d his

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA'_ENTERED AT 17:36:27 ON 18 OCT 2002 13784 S CALCINEURIN L1 26 S L1 (P) (ENDOGENOUS INHIBITOR) L2 6 DUPLICATE REMOVE L2 (20 DUPLICATES REMOVED) L3 => s calcipressin 18 CALCIPRESSIN => s cspl 144 CSP1 => s 15 (p) 110 L5 (P) L1 => s 14 (p) 11 16 L4 (P) L1 => duplicate remove 17 DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH' KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n PROCESSING COMPLETED FOR L7 4 DUPLICATE REMOVE L7 (12 DUPLICATES REMOVED) => s 18 not 13 4 L8 NOT L3 => d 19 1-4 ibib abs ANSWER 1 OF 4 MEDLINE ACCESSION NUMBER: 2002300827 MEDLINE DOCUMENT NUMBER: 22035335 PubMed ID: 12039863 TITLE: The DSCR1 (Adapt78) isoform 1 protein ***calcipressin*** 1 inhibits ***calcineurin*** and protects against acute calcium-mediated stress damage, including transient oxidative stress. Ermak Gennady; Harris Cathryn D; Davies Kelvin J A AUTHOR: CORPORATE SOURCE: Ethel Percy Andrus Gerontology Center, and Division of Molecular and Computational Biology, University of Southern California, Los Angeles, California 90089-0191, USA. CONTRACT NUMBER: AG16256 (NIA) SOURCE: FASEB JOURNAL, (2002 Jun) 16 (8) 814-24. Journal code: 8804484. ISSN: 1530-6860. PUB. COUNTRY: United States Journal; Article; (JOURNAL ARTICLE) DOCUMENT TYPE: LANGUAGE: English FILE SEGMENT: Priority Journals ENTRY MONTH: 200206 ENTRY DATE: Entered STN: 20020604 Last Updated on STN: 20020611 Entered Medline: 20020607 Although DSCR1 (Adapt78) has been associated with successful adaptation to oxidative stress and calcium stress and with devastating diseases such as Alzheimer's and Down syndrome, no rationale for these apparently contradictory findings has been tested. In fact, DSCR1 (Adapt78) has not yet been proved to provide protection against acute oxidative stress or calcium stress. We have addressed this question using cross-adaptation to

AΒ H2O2 and the calcium ionophore A23187, stable DSCR1 (Adapt78) transfection and overexpression in hamster HA-1 cells, 'tet-off' regulated DSCR1 (Adapt78) isoform 1 transgene expression in human PC-12 cells, and DSCR1 (Adapt78) antisense oligonucleotides to test the ability of the DSCR1

Jing.dde that cells may transfently use increased express. host the follow Adapt78 gene product ***calcipress:n*** I to provide short term protection against acute oxidative stress and other calcium mediated . ptragges whereas obropic sucrespragnish was be approinted with Alphoims.

MEDLINE ANSWER 2 OF 4

ACCESSION NUMBER: 2000436191

MEDLINE

TubMed ID: 10899116 DOCUMENT NUMBER: 20359261

Identification and characterization of a highly conserved TITLE:

calcineurin binding protein, CBP1/
calcipressin , in Cryptococcus neoformans. Gorlach J: Fox D S; Cutler N S; Cox G M; Perfect J R;

Heitman J

Departments of Genetics, Medicine, Microbiology, CORPORATE SOURCE:

Pharmacology and Cancer Biology, and The Howard Hughes Medical Institute, Duke University Medical Center, Durham,

NC 27710, USA.

CONTRACT NUMBER: 5T32A107392 (NIAID)

RO1AI39115 (NIAID) RO1AI42159 (NIAID)

SOURCE:

AUTHOR:

EMBO JOURNAL, (2000 Jul 17) 19 (14) 3618-29.

Journal code: 8208664. ISSN: 0261-4189.

PUB. COUNTRY:

ENGLAND: United Kingdom

DOCUMENT TYPE:

Journal; Article; (JOURNAL ARTICLE)

LANGUAGE:

English

FILE SEGMENT:

Priority Journals

ENTRY MONTH:

200009

ENTRY DATE:

Entered STN: 20000928

Last Updated on STN: 20000928 Entered Medline: 20000918

Calcineurin is the conserved target of the immunosuppressants cyclosporin A and FK506. Using the yeast two-hybrid system, we identified a novel calcineurin binding protein, CBP1, from the pathogenic fungus Cryptococcus neoformans. We show that CBP1 binds to calcineurin in vitro and in vivo, and FKBP12-FK506 inhibits CBP1 binding to calcineurin. Cryptococcus neoformans cbpl mutant strains exhibit modest defects in growth under stress conditions and virulence, similar to but less severe than the phenotypes of calcineurin mutants. Saccharomyces cerevisiae mutants lacking the CBP1 homolog RCN1 are, like calcineurin mutants, sensitive to lithium cation stress. CBP1 shares a central peptide sequence motif, SPPxSPP, with related proteins in S.CEREVISIAE:, Schizosaccharomyces pombe, Drosophila melanogaster, Caenorhabditis elegans and humans, and peptides containing this motif altered calcineurin activity in vitro. Interestingly, the human CBP1 homolog DSCR1 is encoded by the Down's syndrome candidate region interval on chromosome 21, is highly expressed in the heart and central nervous system, and may play a role in calcineurin functions in heart development, neurite extension and memory.

ANSWER 3 OF 4 MEDLINE

ACCESSION NUMBER: 2000386788 MEDLINE

DOCUMENT NUMBER:

20347037 PubMed ID: 10887154

TITLE:

A conserved family of calcineurin regulators.

AUTHOR:

Kingsbury T J; Cunningham K W

CORPORATE SOURCE: Department of Biology, Johns Hopkins University, Baltimore,

MD 21218, USA.

CONTRACT NUMBER:

GM53082 (NIGMS)

SCULCE:

GENES AND DEVELOPMENT, (2000 Jul 1) 14 (13) 1595-604.

Journal code: 8711660. ISSN: 0890-9369.

United States

PUB. COUNTRY: DOCUMENT TYPE:

Journal; Article; (JOURNAL ARTICLE)

LANGUAGE:

English

FILE SEGMENT:

Priority Journals

ENTRY MONTH:

200008

ENTRY DATE:

Entered STN: 20000818

Last Updated on STN: 20000818 Entered Medline: 20000804

t the yeast protein Fonly or the numan homblogs DECF1 or MART 4 chairsted two independent functions of ***calcineurin*** in yeast: The activation of the transcription factor Tonlp and the inhibition of the 8 · "Ca O+ exchanger Moxim. Purified recombinant Ponor and PSCP1 bound

induced Rcnlp expression, suggesting that Rcnlp operates as an endogenous feedback inhibitor of * alcineurin*** . Surprisingly, h1 null mutants exhibited phenotypes similar to those of Rcnlp-overexpressing cells. This effect may be due to lower expression of ***calcineurin*** in rcnl mutants during signaling conditions. Thus, Rcnlp levels may fine-tune ***calcineurin*** signaling in yeast. The structural and functional conservation between Rcnlp and DSCR1 suggests that the mammalian Rcnlp-related proteins, termed ***calcipressins*** , will modulate ***calcineurin*** signaling in humans and potentially contribute to disorders such as Down Syndrome.

ANSWER 4 OF 4 CAPLUS COPYRIGHT 2002 ACS 2002:642908 CAPLUS ACCESSION NUMBER: Regulation of ***calcineurin*** signaling in TITLE: saccharomyces cerevisiae by sphingosine-1-phosphate and ***calcipressins*** Birchwood, Christine Jo-Anne AUTHOR(S): Johns Hopkins Univ., Baltimore, MD, USA CORPORATE SOURCE: (2002) 165 pp. Avail.: UMI, Order No. DA3028234 SOURCE: From: Diss. Abstr. Int., B 2002, 62(10), 4311 DOCUMENT TYPE: Dissertation LANGUAGE: English AB Unavailable => d his (FILE 'HOME' ENTERED AT 17:35:59 ON 18 OCT 2002) FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT 17:36:27 ON 18 OCT 2002 L1 13784 S CALCINEURIN L2 26 S L1 (P) (ENDOGENOUS INHIBITOR) L3 6 DUPLICATE REMOVE L2 (20 DUPLICATES REMOVED) 18 S CALCIPRESSIN 144 S CSP1 L5 0 S L5 (P) L1 L6 L7 16 S L4 (P) L1 4 DUPLICATE REMOVE L7 (12 DUPLICATES REMOVED) L8 L9 4 S L8 NOT L3 => log y E FILE ENTRY COST IN U.S. DOLLARS SINCE FILE TOTAL SESSION FULL ESTIMATED COST 17.65 17.86

SINCE FILE

ENTRY

-0.62

TOTAL

SESSION

-0.62

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

STN INTERNATIONAL LOGOFF AT 17-40-17 ON 19 OGT 2002

CA SUBSCRIBER PRICE